

Cochrane Database of Systematic Reviews

Acupuncture for stroke rehabilitation (Review)

Vanσ A	Wu HM,	Tanσ	II XIII	Yanσ	M Liu	GI
iang A,	vvu i iivi,	iang.	JL, AU L	, rang	™, ∟iu	GJ

Yang A, Wu HM, Tang JL, Xu L, Yang M, Liu GJ. Acupuncture for stroke rehabilitation. *Cochrane Database of Systematic Reviews* 2016, Issue 8. Art. No.: CD004131. DOI: 10.1002/14651858.CD004131.pub3.

www.cochranelibrary.com



[Intervention Review]

Acupuncture for stroke rehabilitation

Ai Yang¹, Hong Mei Wu¹, Jin-Ling Tang², Li Xu³, Ming Yang¹, Guan J Liu⁴

¹Center of Geriatrics and Gerontology, West China Hospital, Sichuan University, Chengdu, China. ²Division of Epidemiology, The Jockey Club School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong SAR, China. ³Center of Health Care and Management, Hospital of Chengdu Office of People's Government of Tibetan Autonomous Region, Chengdu, China. ⁴Chinese Cochrane Centre, Chinese Evidence-Based Medicine Centre, West China Hospital, Sichuan University, Chengdu, China

Contact: Hong Mei Wu, Center of Geriatrics and Gerontology, West China Hospital, Sichuan University, 37 Guo Xue street, Chengdu, China. drwhm@163.com, drwhm@126.com.

Editorial group: Cochrane Stroke Group.

Publication status and date: New search for studies and content updated (no change to conclusions), published in Issue 8, 2016.

Citation: Yang A, Wu HM, Tang JL, Xu L, Yang M, Liu GJ. Acupuncture for stroke rehabilitation. *Cochrane Database of Systematic Reviews* 2016, Issue 8. Art. No.: CD004131. DOI: 10.1002/14651858.CD004131.pub3.

Copyright © 2016 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

ABSTRACT

Background

Stroke is the second most common cause of death in the world and in China it has now become the main cause of death. It is also a main cause of adult disability and dependency. Acupuncture for stroke has been used in China for hundreds of years and is increasingly practiced in some Western countries. This is an update of the Cochrane review originally published in 2006.

Objectives

To determine the efficacy and safety of acupuncture therapy in people with subacute and chronic stroke. We intended to test the following hypotheses: 1) acupuncture can reduce the risk of death or dependency in people with subacute and chronic stroke at the end of treatment and at follow-up; 2) acupuncture can improve neurological deficit and quality of life after treatment and at the end of follow-up; 3) acupuncture can reduce the number of people requiring institutional care; and 4) acupuncture is not associated with any intolerable adverse effects.

Search methods

We searched the Cochrane Stroke Group Trials Register (June 2015), the Cochrane Central Register of Controlled Trials (CENTRAL; *Cochrane Library* 2015, Issue 7), MEDLINE (1966 to July 2015, Ovid), EMBASE (1980 to July 2015, Ovid), CINAHL (1982 to July 2015, EBSCO), and AMED (1985 to July 2015, Ovid). We also searched the following four Chinese medical databases: China Biological Medicine Database (July 2015); Chinase Science and Technique Journals Database (July 2015); China National Infrastructure (July 2015), and Wan Fang database (July 2015).

Selection criteria

Truly randomised unconfounded clinical trials among people with ischaemic or haemorrhagic stroke, in the subacute or chronic stage, comparing acupuncture involving needling with placebo acupuncture, sham acupuncture, or no acupuncture.

Data collection and analysis

Two review authors independently selected trials for inclusion, assessed quality, extracted and cross-checked the data.

Main results

We included 31 trials with a total of 2257 participants in the subacute or chronic stages of stroke. The methodological quality of most of the included trials was not high. The quality of evidence for the main outcomes was low or very low based on the assessment by the system of Grades of Recommendation, Assessment, Development and Evaluation (GRADE).



Two trials compared real acupuncture plus baseline treatment with sham acupuncture plus baseline treatment. There was no evidence of differences in the changes of motor function and quality of life between real acupuncture and sham acupuncture for people with stroke in the convalescent stage.

Twenty-nine trials compared acupuncture plus baseline treatment versus baseline treatment alone. Compared with no acupuncture, for people with stroke in the convalescent phase, acupuncture had beneficial effects on the improvement of dependency (activity of daily living) measured by Barthel Index (nine trials, 616 participants; mean difference (MD) 9.19, 95% confidence interval (CI) 4.34 to 14.05; GRADE very low), global neurological deficiency (seven trials, 543 participants; odds ratio (OR) 3.89, 95% CI 1.78 to 8.49; GRADE low), and specific neurological impairments including motor function measured by Fugl-Meyer Assessment (four trials, 245 participants; MD 6.16, 95% CI 4.20 to 8.11; GRADE low), cognitive function measured by the Mini-Mental State Examination (five trials, 278 participants; MD 2.54, 95% CI 0.03 to 5.05; GRADE very low), depression measured by the Hamilton Depression Scale (six trials, 552 participants; MD -2.58, 95% CI -3.28 to -1.87; GRADE very low), swallowing function measured by drinking test (two trials, 200 participants; MD -1.11, 95% CI -2.08 to -0.14; GRADE very low), and pain measured by the Visual Analogue Scale (two trials, 118 participants; MD -2.88, 95% CI -3.68 to -2.09; GRADE low). Sickness caused by acupuncture and intolerance of pain at acupoints were reported in a few participants with stroke in the acupuncture groups. No data on death, the proportion of people requiring institutional care or requiring extensive family support, and all-cause mortality were available in all included trials.

Authors' conclusions

From the available evidence, acupuncture may have beneficial effects on improving dependency, global neurological deficiency, and some specific neurological impairments for people with stroke in the convalescent stage, with no obvious serious adverse events. However, most included trials were of inadequate quality and size. There is, therefore, inadequate evidence to draw any conclusions about its routine use. Rigorously designed, randomised, multi-centre, large sample trials of acupuncture for stroke are needed to further assess its effects.

PLAIN LANGUAGE SUMMARY

Acupuncture for stroke rehabilitation

Review question

Acupuncture is a treatment based on ancient Chinese medicine in which fine needles or pressure is applied at certain sites in the body for therapeutic purposes. We wanted to know whether acupuncture is effective in improving the recovery of daily activities, movement, and quality of life in people who had experienced a stroke more than one month previously.

Background

Stroke is a major cause of death in the world and can also cause severe disability. Acupuncture is a relatively simple, inexpensive and safe treatment that has been used in China for hundreds of years and is increasingly practiced in some Western countries. However, it remains uncertain whether the existing evidence is sufficiently reliable to recommend the routine use of acupuncture.

Study characteristics

We identified 31 studies to July 2015 for inclusion in the review. These included a total of 2257 participants who had had a stroke more than one month previously. They all investigated acupuncture aimed at promoting recovery compared with no acupuncture or sham acupuncture. Outcomes included measures of daily activities (activities of daily living), neurological function, movement, cognition, depression, swallowing, pain, and quality of life. Most of the studies (29/31) were conducted in China; the studies varied considerably with respect to the time of stroke, specific techniques used, and the frequency of acupuncture.

Key results

We found some evidence that acupuncture improved activities of daily living and a number of aspects of neurological function. However, these conclusions were based on studies with low quality evidence. No serious side effects were reported and there was no information on the effects of acupuncture on death or the need for institutional care.

Quality of the evidence

It proved difficult to reliably determine the quality of the evidence because of poor reporting of study characteristics. Therefore, we have described most conclusions as having low or very low quality evidence.